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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,976	12/11/2000	Martyn Fice	537-1036	4648

7590 04/21/2004  
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EXAMINER

SHEW, JOHN

ART UNIT PAPER NUMBER

2664

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/734,976

Applicant(s)

FICE ET AL.

Examiner

John L. Shew

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-13, 15-22 and 24 is/are allowed.
- 6) ☒ Claim(s) 1-8, 14, 23 and 25-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings are required in this application because all figures encompass aspects of freehand markings. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:  
Page 1 line 27 cites "circuitry to be employed which has a lower detection bandwidth that that which" should be "than that which".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-7, 23 and 26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Data structures are descriptive material per se and are not statutory because they are neither physical "things" nor statutory processes. Such claimed structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 7, 8, 14, 23, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bononi in view of Hayashi et al.

Claims 1, 7, 8, 14, 23, 25 and 26, Bononi teaches an apparatus for reading data from an optical packet (Fig. 1) referenced by header recognition module, transmitted over an optical network (page 872 column 1 Title) referenced by transparent optical networks, the packet comprising a packet header and a packet payload (Fig. 2) referenced by clock for the packet header and data for the packet payload, wherein the first section of the packet header comprises a series of clock pulses (Fig. 2) referenced by the clock section, wherein the first section of clock pulses is a multiple or sub-multiple (Fig. 4, page 873 column 1 lines 7-12) referenced by only a part of the clock segment being transmitted and the complete clock comb can be locally reconstructed based on multiple factor  $m$ , apparatus comprising a splitter (Fig. 2) referenced by switch S, a delay element for delaying the first section (Fig. 2) referenced by optical delay of the clock coupler, to provide timing instants (Fig. 2) referenced by clock. Bononi does not teach a packet header with a first and second section. Hayashi teaches a packet header with a first and second section (FIG. 3) referenced by the Clock Run In for the first section and the Framing Code and Service ID code for the second section, the packet header preceding the packet payload (FIG. 3) referenced by packet header of CRI, FC and Service ID followed by packet payload of Data ID Code and Data Block, a series of clock pulses of the header first section (FIG. 3) referenced by Clock Run In, provide timing instants for interpreting the second section (FIG. 5, column 6 lines 51-56) referenced by Data Slicer 22 using clocks synchronized to the input video signal, the data rate of the second section is equal to the data rate of the first section is inherent for synchronization for data extraction.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a packet header into two sections, the first section for clocking and the second section for data related codes for providing synchronized clocking to extract packet data.

Claim 2, Bononi teaches the data in the payload has a higher data rate than the data rate of the second section of the packet header (Fig. 2, page 872 lines 30-34) referenced by the payload data rate at  $R$  and the second section clock rate at  $R_c$ .

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bononi and Hayashi as applied to claims 1, 8, 14 and 25 above, and further in view of Tanabe. Bononi and Hayashi teaches a self-clocking protocol over an optical network. Bononi and Hayashi does not disclose the duration of the packet header first section is equal to the packet header second section. Tanabe discloses the duration of the first section is equal to the duration of the second section (FIG. 2, column 2 lines 65-68, column 3 lines 1-8) referenced by the CRI being 16 bits, the FC being 8 bits and the SI being 8 bits. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a packet header into two equal sections, the first section for clocking and the second section for data related codes for providing synchronized clocking to extract packet data.

***Allowable Subject Matter***

5. Claims 9-13, 15-22 and 24 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art search did not disclose the separation of an optical packet into a header and a payload wherein the header is comprises of two sections, a first section containing timing clocks and a second part containing routing information, with the packet payload at a higher data rate than the packet header. Patent 5831752, Cotter discloses an optical packet processing system where a marker pulse is incorporated within the packet. The marker pulse is subsequently regenerated into a series of clock pulses to synchronize the data coming into an optical switch. Patent 6694098, Warbrick teaches a method of reading data from an optical packet header. The packet carries a header and a payload wherein the payload is transmitted at a higher rate. The header is identified by low modulation depth, but does not carry an explicit section containing timing clocks. Patent 5841560, Prucnal teaches a optical pulse train compression system. The clocking train is generated at successively higher rates by staging with each stage adding new clock pulses to the train.

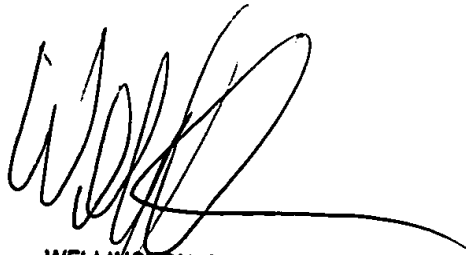
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to John L Shew whose telephone number is 703-305-8708. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 703-305-4366. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

js



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